

## **Abstract of the Disclosure**

### **APPARATUS AND METHOD FOR PRE-FETCHING PAGE DATA USING SEGMENT TABLE DATA**

A computer system includes a main memory, at least one processor, and at least one level of cache. The system contains at least one segment table having multiple segment entries recording the assignment of segments in an address space. At least some segment table entries include pre-fetch data indicating which portions of a segment should be pre-fetched. Preferably, a segment table entry contains a list of pages for pre-fetching. Preferably, pre-fetching a listed page causes address translation data for the page to be cached in at least one address translation caching structure. Pre-fetching may also cause data contents of the page to be loaded into a cache.